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THE FLORIDA COLLECTION OF NEMATODES

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The Florida Collection of Nematodes now houses approximately 8000 units consisting of 5800 slides and 2200 bottles of nematode specimens. Included are specimens from 36 countries and from 24 states within the United States. The collection is jointly sponsored by the Division of Plant Industry, (Florida Department of Agriculture and Consumer Services), and the Institute of Food and Agricultural Sciences (University of Florida). It will incorporate the separate collections of both agencies which have been accumulating for many years and will be housed at the Division of Plant Industry. These separate collections have grown in breadth and depth with contributions from both within and outside the State of Florida. They now contain specimens of plant, insect, and animal parasites as well as free living soil, freshwater, and marine nematodes.

Florida's geographical and ecological uniqueness provides an unusual variety of flora and fauna which create many different habitats for a great diversity of temperate, tropical, and subtropical nematodes. Additionally, Florida has one of the largest concentrations of professional nematologists in the United States. These factors combine to present a unique opportunity for building and maintaining a scientific collection of exceptional diversity. A readily accessible collection which can furnish reference specimens for nematode identification or provide a repository for type and voucher specimens would be a benefit not only to the State of Florida but to members of the scientific community both elsewhere in the United States and in other countries.

Adequate staffing has not been available to properly maintain and curate these two component collections. As a result, the combined Florida Collection is now undergoing a program of reorganization and refurbishment, which involves evaluating, repairing, and cataloguing all slides and bottles.

Reference data from the records of all specimens are being catalogued for computer processing into a specially prepared data base which is run by the PC File III, Version 4 applications software. We have found this software to be quite satisfactory. A data base and record format can be established to meet individual needs, and personnel unfamiliar with computers can easily learn the functions for data entry. Over 2000 bottled specimens are being transferred to hermetically sealed vials in order to eliminate both the loss of specimens from slow evaporation and the hours of maintenance needed to monitor and replenish fluid levels in the bottles (1).

During the past year, 500 new units of slides and bottles have been prepared and deposited into the collection. When the reorganization is completed, the collection will be maintained and curated in 4 distinct cagegories: type, reference voucher, teaching, and mass.

The heart of a systematics collection is the collection of type specimens. A type collection might be thought of as a bureau of standards for specimen identification. The word "type" is a term applied to a single specimen

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which has been designated to serve as the basis for the original description and scientific naming of that organism. There is a hierarchy of terms associated with the concept of type specimens. Some of these will be discussed briefly.

The holotype is a single specimen designated as the type by an author in his published description of a new species or new genus. The holotype serves as a permanent yardstick by which all other specimens of that genus or species are defined, compared, and recognized. Paratypes are all remaining specimens of the same identity which share the same collection data as the holotype. There may be no paratypes, or as few as one, or there may be many hundred.

Syntypes are specimens of the same identity and from the same collection series which provided the material studied by the original author of a species or genus when that author did not designate a single specimen as the type specimen. A lectotype is a specimen which may be designated from one of the syntypes to serve the same purpose as a holotype, if no type specimen has been designated by the original author. Under these conditions, the specimen is always referred to as the lectotype; it is never referred to as the holotype. Paralectotypes are the remaining syntypes. They serve the same purpose as paratypes.

A neotype is a single specimen selected to serve as the type specimen in the absence of a holotype or a lectotype through loss, destruction or other conditions defined in the International Code of Zoological Nomenclature.

Topotypes are specimens collected from the same locality and host as the type specimen, or from colonies that originated from type specimens or topotype collections.

Voucher specimens are documentary specimens and are retained to verify the identities of species used in research and publications, or of species involved in regulatory activity. Reference specimens are high quality specimens which can be used for comparative studies. They are retained as permanent units of the collection and may be loaned only to professional workers engaged in serious research.

The teaching collection will consist of specimens which are intended for demonstration purposes. They are less valuable than type, reference, or voucher specimens, and are satisfactory for demonstration or loan under conditions where the chances of loss through breakage or non-return may appear to be probable.

The mass collection includes specimens which are awaiting identification, handling, or further study, as well as massed quantities of identified specimens. This is a collection of bottled specimens.

All specimens donated to the collection in bottles or on slides will be greatly appreciated. In order that we might be able to give the best of care to incoming specimens, we ask that the type of preservative or mounting medium be specified along with the reference information accompanying the specimens.

References cited:

1. MacGowan, J. B. 1986. A new efficient technique for permanent nematode storage. J. Nematol. 18(3):419-42Ø.

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